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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/762,636

01/21/2004

Robert Rickenbach

5297

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7590

12/30/2004

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EXAMINER

DOAN, JENNIFER

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,636

Applicant(s)

RICKENBACH, ROBERT

Examiner

Jennifer Doan

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 is/are allowed.
- 6) ☒ Claim(s) 15-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 012104.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 01/21/2004, have all been considered and made of record (note the attached copy of form PTO-1449).

Drawings

2. The drawings, filed on 01/21/2004, are accepted.

Specification

3. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Lizotte et al. (U.S. Patent 6,256,121).

With respect to claim 15, Lizotte et al. (figure 13) disclose a method of communicating between a computer (20) and a machine (112) comprising the steps installing between the computer (20) and the machine (112) a communication cable (114) that has integrated both electrical wiring for power transmission and optical fibers for transmitting of control signals.

With respect to claim 16, Lizotte et al. (figure 13) disclose a method of communicating between a computer (20) and a machine (112) further comprising prior to installing step there is the additional step of constructing the cable (114) so the optical fibers are fixed in position within end connectors to decrease the possibility of non-operation due to installation in an abusive environment.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lizotte et al. (as cited above) in view of Rose et al. (U.S. Patent 5,967,840).

With respect to claim 17, Lizotte et al. (figure 13) disclose a method of communicating between a computer (20) and a machine (112) of the claimed invention.

Lizotte et al. do not disclose a method, wherein the constructing steps includes installing within the end connectors a flexible printed circuit board.

However, Rose et al. discloses the step of installing within the end connectors a flexible printed circuit board (in abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the step of installing within the end connectors a flexible printed circuit board into Lizotte method (accordance with the teaching of Rose et al.) for the purpose of making a better optical connector.

Allowable Subject Matter

8. Claims 1-14 are allowed.

The prior art of record fails to disclose or reasonably suggest a communication cable comprising a transmitting connector; a receiving connector; an elongated flexible conductor integrated between the transmitting connector and receiving connector, and the transmitting connector including a first light emitting device connected to the optical fiber, the first light emitting device to receive an electrical signal and then convert the electrical signal into a

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corresponding light signal which is transmitted through the optical fiber to be reconverted back into an electrical signal by a first light receiving device at the receiving connector as recited in claims 1 and 6; and a light pulse emitter mounted within the housing, the light pulse emitter being connected to a flexible printed circuit board, the flexible printed circuit board being mounted within the housing; and a light pulse receiver connected to the housing, the light pulse receiver to receive a light pulse from the light pulse emitter and transmit same to an output path located exteriorly of the housing as recited in claim 11.

Claims 2-5, 7-10 and 12-14 are dependent on the allowable claims 1, 6 and 11 respectively. Therefore, claims 2-5, 7-10 and 12-14 are also allowed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stenger et al. (U.S. Patent 4,787,701) disclose an optical fiber contact assembly for aligning optical fiber contacts. And Hirschmann et al. (U.S. Patent 5,064,299) disclose an optocoupler apparatus.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344.

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The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent examiner

December 21, 2004



AKM ENAYET ULLAH
PRIMARY EXAMINER